

ABSTRACT

A method and a device for converting energy uses chemical reactions in close proximity to or on a surface to
5 convert a substantial fraction of the available chemical energy of the shorter lived energized products, such as vibrationally excited chemicals and hot electrons, directly into a useful form, such as longer lived charge carriers in a semiconductor. The carriers store the excitation
10 energy in a form that may be converted into other useful forms, such as electricity, nearly monochromatic electromagnetic radiation or carriers for stimulating other surface reactions.

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